



NORTHERN HARDWOOD NOTES

Seed Crop Frequency In Northeastern Wisconsin

Knowing the frequency of good seed crops is important in regenerating northern hardwood species, particularly those that require site preparation and special cutting methods. It is also desirable to know the maximum time that might be expected between poor crops to help schedule silvicultural treatment or supplemental seeding. Based on up to 35 years of observation the following frequencies and maximum number of successive years of good and bad crops can be expected in northern Wisconsin:

	Number of years observed	Seed crop' freauencv	Maximum number of successive years of		
		Good	Poor	Good crops	Poor crops
Spring-maturing species		Percent of years			
Quaking aspen	33	67	24	6	2
Bigtooth aspen	32	62	22	6	2
Red maple	30	60	23	8	5
American elm	29	41	41	3	5
Fall-maturing species					
Hardwoods					
Sugar maple	35	40	43	4	2
Yellow birch	35	40	34	4	3
Paper birch	33	27	39	2	5
Basswood	35	63	23	4	2
White ash	35	43	51	3	4
Black ash	34	32	62	2	7
Northern red oak	30	47	40	6	2
Conifers					
Eastern hemlock	34	59	23	5	2
Balsam fir	34	38	56	3	8
Northern white-cedar	34	73	15	15	2
Eastern white pine	35	40	43	2	3
Red pine	34	23	50	2	2
White spruce	34	38	35	3	3
Black spruce	34	44	29	6	4
Jack pine	35	57	17	16	2

"Good" means 61 percent or more of full crop and "poor" means 35 percent or less of full crop.

Here's how this information might be used. Site preparation necessary to regenerate paper birch and possibly red maple normally remains effective for 3 years. This is less time than the succession of poor years shown in the above table; so the odds of a good seedfall while the site is still conducive to regeneration are poor for these two species.

To complicate things further, a good seed crop doesn't necessarily mean the seeds are viable. In white ash, for example, flowering and seed production were observed for 9 years. A "good" seed crop developed during 3 of these years, but seeds were viable during only 1 of these "good" years. (Frost and hard rain killed *all* male flowers during 2 of the 3 years, and most of them the third year, but pollination was still sufficient the third year to get viable seeds.) So, really viable seed crops in white ash, and probably other species, may occur at long intervals.

Richard M. Godman and Gilbert A. Mattson